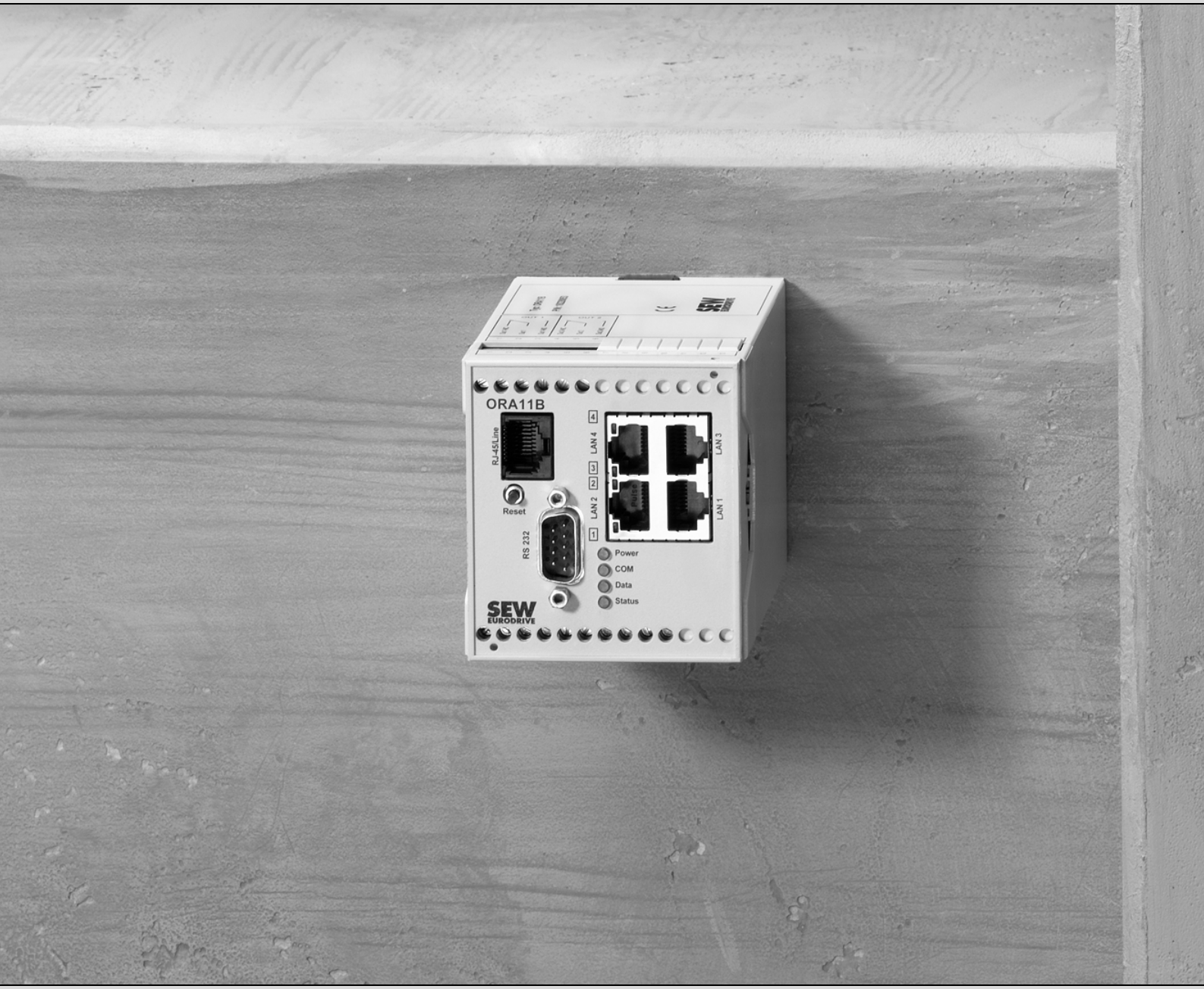
SEW EURODRIVE



MOVI-PLC® *advanced* Controller
Remote Maintenance via ORA11B

Edition 09/2008

16717228 / EN

Manual

SEW
EURODRIVE

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1 General Notes

1.1 Use of the manual

The manual is part of the product and contains important information on operation and service. The manual is written for everyone starting up or servicing this product.

The manual must be accessible and legible. Make sure that persons responsible for the system and its operation, as well as persons who work independently on the unit, have read through the manual carefully and understood it. Consult SEW-EURODRIVE if you have any questions or if you require further information.

1.2 Structure of the safety notes

The safety notes in this manual are designed as follows:

Symbol	SIGNAL WORD!
	Nature and source of hazard. Possible consequence(s) if disregarded. • Measure(s) to avoid the hazard.

Symbol	Signal word	Meaning	Consequences if disregarded
Example: General hazard Specific hazard, e.g. electric shock	**HAZARD!**	Imminent hazard	Severe or fatal injuries
	WARNING!	Possible hazardous situation	Severe or fatal injuries
	CAUTION!	Possible hazardous situation	Minor injuries
	CAUTION!	Possible damage to property	Damage to the drive system or its environment
	NOTE	Useful information or tip. Simplifies handling of the drive system.	

1.3 Right to claim under warranty

You must observe this manual as the prerequisite for fault-free operation and fulfillment of any right to claim under warranty. Therefore, read the documentation before you start working with the software and the connected units from SEW-EURODRIVE.

Make sure that the documentation is available to persons responsible for the system and its operation as well as to persons who work independently on the unit. You must also ensure that the documentation is legible.

1.4 Exclusion of liability

You must observe this manual and the documentation of the connected units from SEW-EURODRIVE to ensure safe operation and to achieve the specified product characteristics and performance requirements. SEW-EURODRIVE assumes no liability for injury to persons or damage to equipment or property resulting from non-observance of these operating instructions. In such cases, any liability for defects is excluded.

SEW-EURODRIVE guarantees that the software is free from deficiencies in title, and that it can be used for the purposes for which it is intended. Beyond this, there is no guarantee for technical details or suitability for a certain purpose.

SEW-EURODRIVE will not be liable for damage, delays or impediments to performance beyond our area of responsibility or for damage as a result of inappropriate, improper or unintended use of the software.

1.5 Copyright notice

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Any reproduction, modification, distribution or unintended use, in whole or in part, is prohibited.

2 Safety Notes

The following basic safety notes are intended to prevent injury to persons and damage to property. The operator must make sure that the basic safety notes are read and observed. Ensure that persons responsible for the machinery and its operation as well as persons who work independently have read through the documentation carefully and understood it. If you are unclear about any of the information in this documentation, or if you require further information, please contact SEW-EURODRIVE.

2.1 Preliminary information

The following safety notes refer to the operation of the ORA11B. If you use other SEW components, also refer to the safety notes for the relevant components in the corresponding documentation.

Please also observe the supplementary safety notes in the individual sections of this documentation.

2.2 General information

⚠ HAZARD!

During operation, the connected units can have live, bare and movable or rotating parts as well as hot surfaces, depending on their enclosure.

Severe or fatal injuries.

- All work related to transportation, storage, setup/mounting, connection, startup, maintenance and repair may only be carried out by qualified personnel, in strict observation of:
  - The relevant detailed operating instructions
  - Warning and safety signs on the units
  - All other relevant project planning documents, operating instructions and wiring diagrams
  - The specific regulations and requirements for the system
  - National/regional regulations governing safety and the prevention of accidents
- Never install damaged products
- Submit a complaint to the shipping company immediately in the event of damage.

Removing covers without authorization, improper use as well as incorrect installation or operation may result in severe injuries to persons or damage to property.

Refer to the documentation for additional information.

2.3 Target group

Only qualified personnel is authorized to install, startup or service the units or correct unit faults (observing IEC 60364 or CENELEC HD 384 or DIN VDE 0100 and IEC 60664 or DIN VDE 0110 as well as national accident prevention guidelines).

Qualified electricians in the context of these basic safety notes are persons familiar with installation, assembly, startup and operation of the product who possess the required qualifications.

All activity in the other areas of transportation, storage, operation, and disposal must be carried out by persons who are appropriately trained.

2.4 Designated use

ORA11B is an analog modem with integrated router and a 4-port switch, which allows remote access to connected units. It can be used to establish a connection via an analog phone line, for example, to a remote facility. Technical data and information on the connection requirements are provided on the nameplate and in the documentation; these must be observed under all circumstances.

2.5 Operation

⚠ WARNING!

Unwanted operating statuses of the system.

Severe or fatal injuries.

An interruption of the communication link between the system and the remote maintenance station can lead to unwanted operating statuses. Make sure that instructed staff has implemented safety measures on site.

2.6 Installation

The connected units must be installed and cooled according to the regulations and specifications in the corresponding documentation.

The connected units contain components that can easily be damaged by electrostatic energy and improper handling. Prevent mechanical damage or destruction of electric components (may pose health risk).

The following applications are prohibited unless the unit is explicitly designed for such use:

- Use in potentially explosive areas
- Use in areas exposed to harmful oils, acids, gases, vapors, dust, radiation, etc.

2.7 Other applicable documentation

The following publications and documents apply to the connected units:

- Operating instructions/manuals of the units
  (Units are, for example, MOVI-PLC®, MOVIDRIVE® B, etc.)
- For units with functional safety technology, also the respective
  "Safe Disconnection Manual - Conditions" manuals

2.8 Disposal

Observe current national regulations!

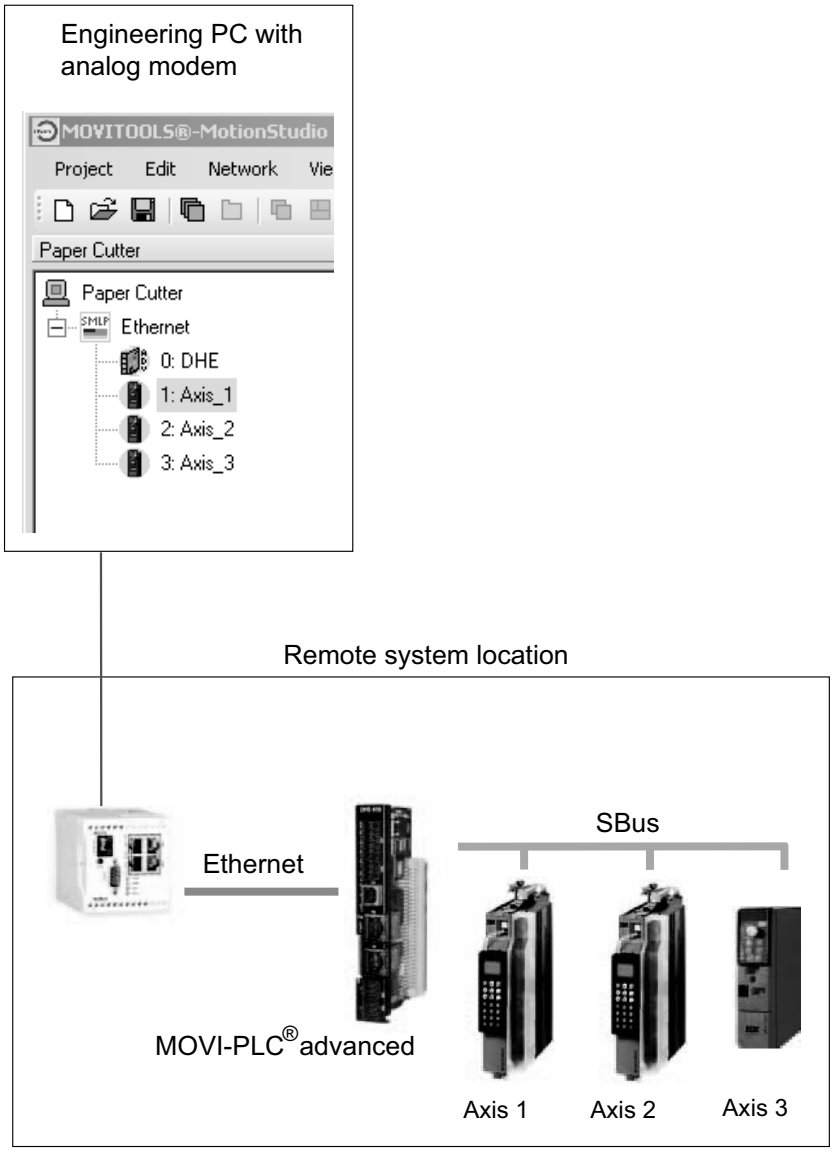
Dispose of the individual materials separately in accordance with the country-specific regulations in force.

3 System Description

3.1 Remote maintenance via the ORA11B modem

Remote maintenance is a key tool in ensuring that the best possible worldwide support is provided for MOVI-PLC® *advanced*. ISDN lines are not available everywhere, and access via Ethernet is often not possible due to network administration requirements. In this case, using an analog modem connection is the best alternative.

ORA11B offers an analog modem, a router and a 4-port switch. It can be used to establish a connection via an analog phone line to a remote facility. This enables the usual access to the MOVI-PLC® *advanced* controller and all units connected to the system bus.



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Scope of delivery of the ORA11B option

The scope of delivery of the ORA11B option (part number 1822 005 3) consists of:

- ORA11B modem
- 2 telephone cables (TAE-N to RJ12 and RJ12 to RJ12), each 3 m long

Optional scope of delivery

- Telephone adapter set for Europe (suitable for Belgium, France, Italy, Austria, Switzerland) part no. 1811 216 1

Content of this manual

This user manual describes the hardware required for remote maintenance of the MOVI-PLC® *advanced* controller and how a connection is established via the ORA11B modem.

	NOTE
	For further function descriptions, refer to the online help of the configuration interface of ORA11B.

4 Assembly and Installation Notes

4.1 Step-by-step instructions for mounting ORA11B to a DIN rail

Proceed as follows:

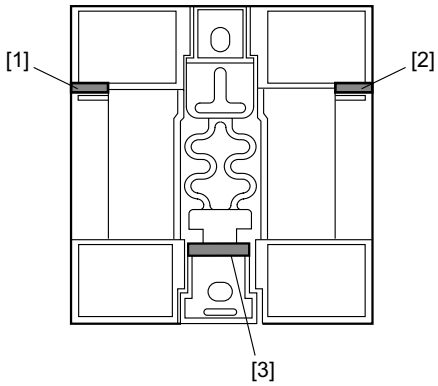
⚠ HAZARD!

Moisture and liquids can enter the interior of the ORA11B.

Severe or fatal injuries from electric shock.

- ORA11B may not be used in wet or moist environments (e.g. close to watercourses).
- Install ORA11B in a dry place that is protected against splashing water.
- Switch off the power supply of the control cabinet and secure it against being switched back on inadvertently before mounting or removing the unit.

- There are 3 latch hooks on the back of the ORA11B (see following figure). Two latch hooks [1, 2] are located at the outer edge, the third latch in the center [3] is movable.



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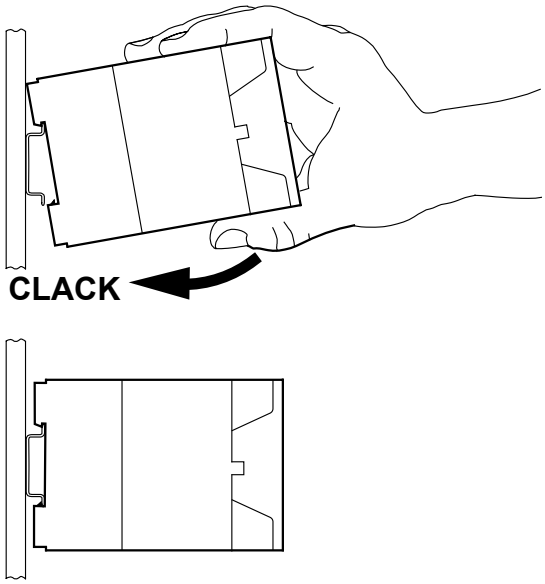
- Position the ORA11B with both latch hooks on the outer edge on the DIN rail according to the following figure. Rotate the ORA11B down towards the DIN rail until the movable latch hook clicks audibly.



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ORA11B is now installed.

4.2 Step-by-step instructions for removing ORA11B from a DIN rail

Proceed as follows:

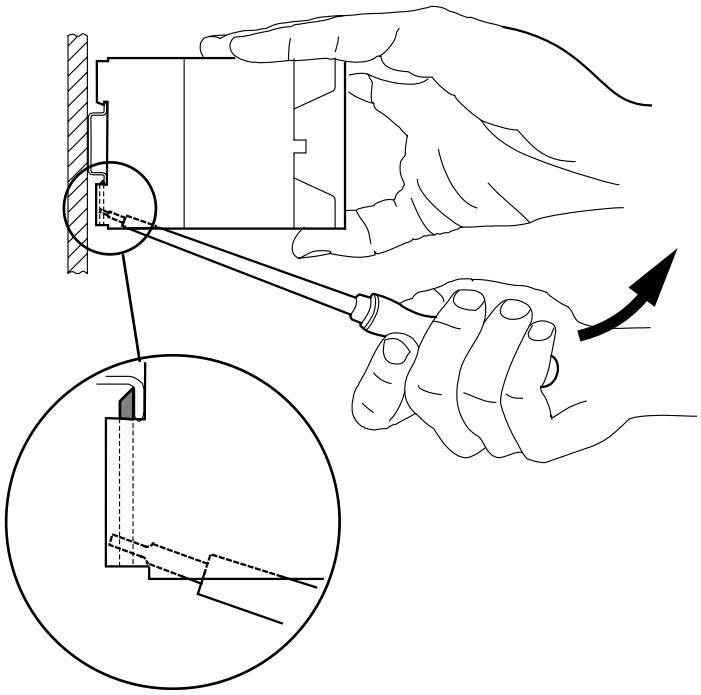
⚠ HAZARD!

Open electric components.

Severe or fatal injuries from electric shock.

- Switch off the power supply of the ORA11B and secure it against being switched back on inadvertently before removing the unit.

- Remove all plug connectors.
- Insert a screwdriver with blade width 4.5 mm in the movable latch hook (see following figure).



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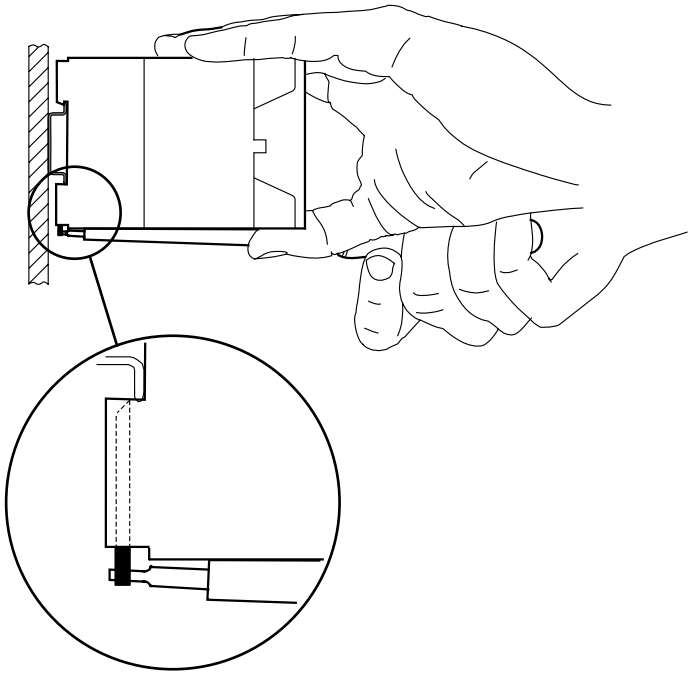
- Move and hold the screwdriver towards the ORA11B (see following figure). This draws apart the plastic spring of the movable latch hook.



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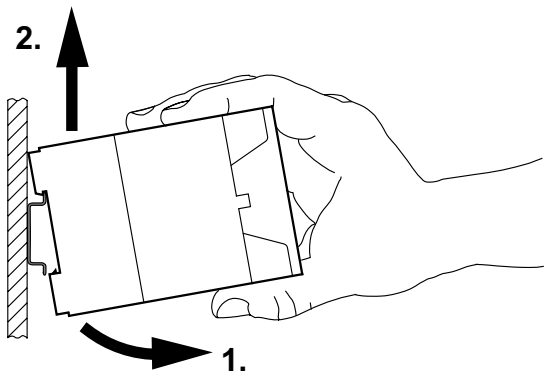
- First pull ORA11B forward and then upward and away from the DIN rail (see following figure).



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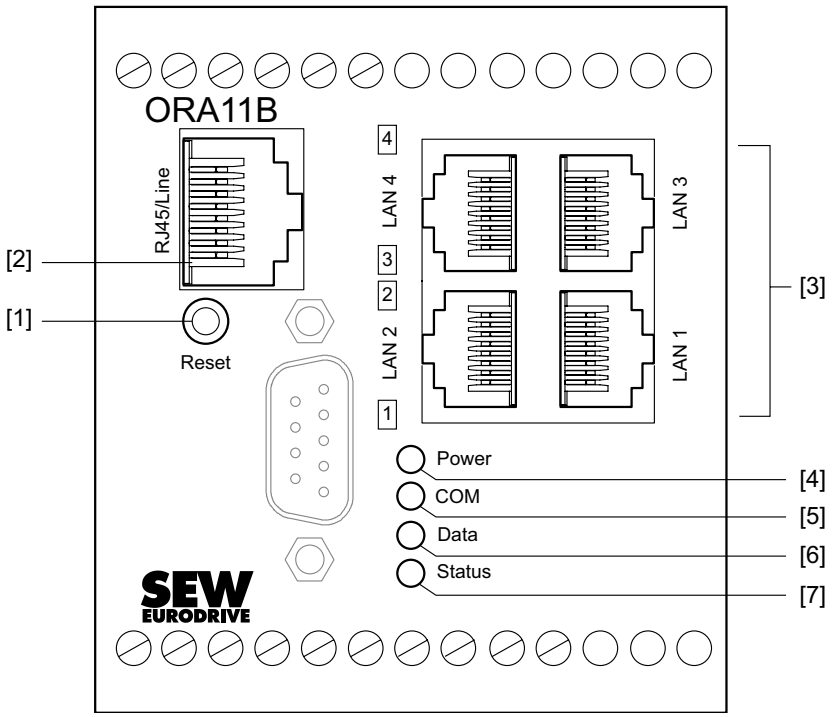
4.3 Connections and terminals at the front of ORA11B

The following figure shows the connections and control elements of the ORA11B option necessary for remote maintenance.



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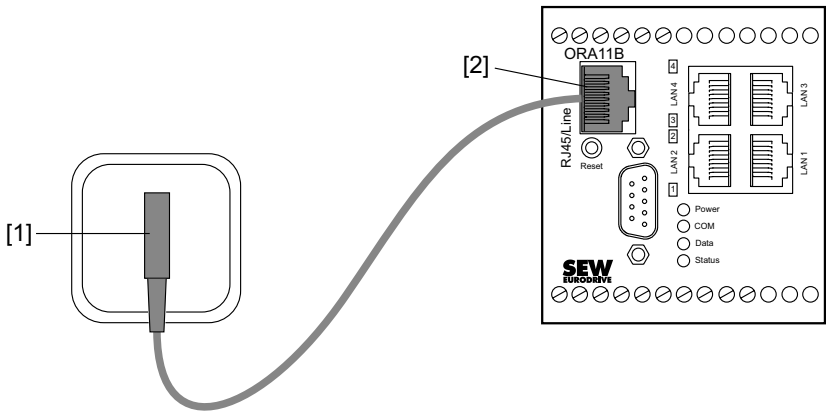
[1] Reset button
[2] Telephone connection (RJ45 plug connector)
[3] 4-port Ethernet switch (LAN 1 - LAN 4) for network connection
[4] Power LED
[5] COM LED
[6] Data LED
[7] Status LED

4.3.1 Reset button

Operation	Meaning
Press once briefly	Resets ORA11B via software and restarts it.
Hold for at least 3 seconds	Resets the hardware of ORA11B and restarts it.
Pressing it 3 times in quick succession within 2 seconds	Deletes all settings of ORA11B and resets the unit to the factory settings.

4.3.2 Connecting ORA11B to an analog telephone line

To connect the modem to the analog telephone line, use the supplied connection cable TAE-N to RJ12 (alternative: RJ12 to RJ12). Insert the RJ12 plug connector [2] in the RJ45 socket of the ORA11B and the TAE-N plug connector [1] in the telephone jack (see following figure).



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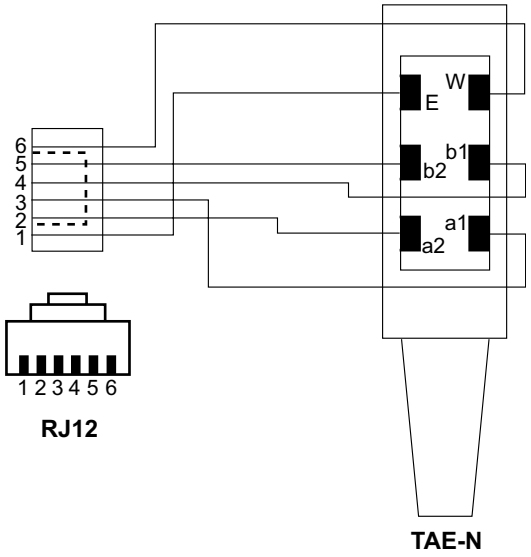
	NOTE
	If the connection cables included in the scope of delivery do not fit your telephone jack, you can use the telephone adapter of the optional telephone adapter set Europe (part no. 1811 216 1) from SEW-EURODRIVE. The Europe telephone adapter set can be used in the following countries: • Belgium • France • Italy • Austria • Switzerland

The following table shows the pin assignment of the RJ12 and TAE-N plug connectors.



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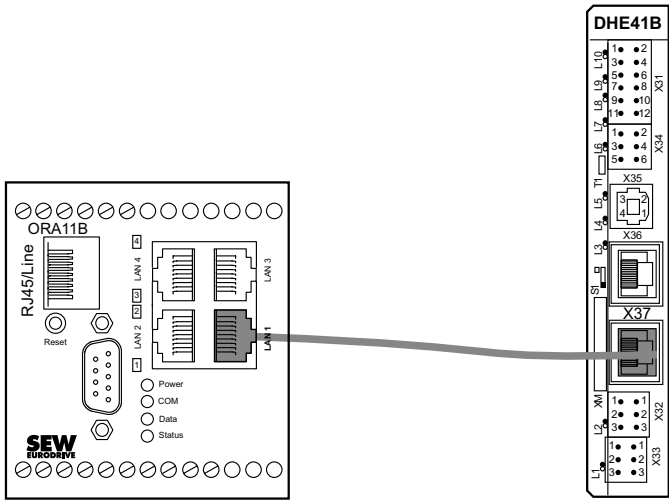
RJ45	TAE-N	Description
Pin		
1	E	Not connected
2	a2	For connecting a downline telephone
3	a1	Incoming telephone line (outside line or extension line)
4	b1	
5	b2	For connecting a downline telephone
6	W	Not connected

4.3.3 Connecting MOVI-PLC® *advanced* to ORA11B

Use an Ethernet cable (RJ45 to RJ45) to connect X37 of the MOVI-PLC® *advanced* controller with an Ethernet switch (LAN 1 - LAN 4) of the ORA11B option (see following figure).



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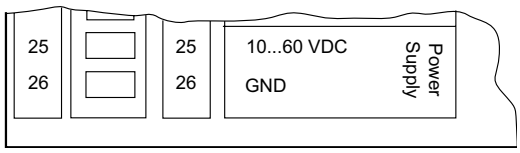
4.3.4 Operating displays of the ORA11B option

The ORA11B option has 8 LEDs that display the current status of ORA11B and the remote maintenance connection.

Designation	Display	Meaning
4 switch port status LEDs (one LED each at LAN1, 2, 3, 4)	• Yellow • Green • LED flashes	• Link with 10 MBit/s • Link with 100 MBit/s • data transfer
Power LED	Green	Supply voltage is present
COM LED	• Green • Orange	• Establishing modem connection • Modem connection is established
Data LED	LED flashes	Receiving data
Status LED	Red	• Initialization phase • A fault has occurred

4.4 Connections and terminals at the bottom of ORA11B

4.4.1 Voltage supply of ORA11B



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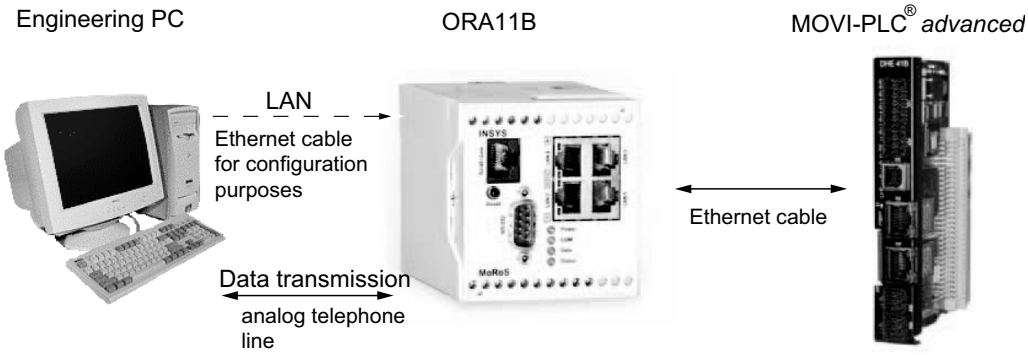
Terminal	Designation	Description
25	10 .... 60 VDC	Voltage supply
26	GND	Mass

5 Configuration

5.1 Used components (topology)



5.2 Overview of assigned IP addresses

	NOTE
	Other IP addresses not listed as examples can be used as well. Note that all IP addresses must be in the network defined by the net mask. This network must be different from existing local networks (check with the IT department if necessary).

Engineering PC

- LAN connection:
  - IP address: 192.168.10.2
  - Net mask: 255.255.255.0
- Remote data transmission connection:
  - The IP address 192.168.1.254 is sent from the ORA11B modem to the RDT link of the engineering PC while the connection is established

ORA11B

- Router/switch:
  - IP address: 192.168.10.3
  - Net mask: 255.255.255.0
- Modem:
  - Local address of the PPP connection: 192.168.1.253
  - IP address of the remote end: 192.168.1.254

MOVI-PLC® advanced

- IP address: 192.168.10.4
- Net mask: 255.255.255.0

5.3 Configuration of ORA11B

5.3.1 Default settings

The ORA11B modem has been configured with the following default settings:

Menu [Basic Settings] / [Web Interface] / [Authentication]	
User name	SEW
Password	ORA11B
Menu [Basic Settings] / [IP Addresses (LAN)]	
IP address	192.168.10.3
Net mask	255.255.255.0
Menu [Dial-In]	
Activate dial-in	Yes
Idle time	0 s
Rings before call is answered	2
Activate NAT	Activated
Authentication for dial-in	Activated
User name	SEW
Password	ORA11B
Authentication via	PAP
IP addresses for PPP connection (WAN)	
Own IP address	192.168.10.253
IP address of the remote end	192.168.10.254

NOTES

- If you reset ORA11B by performing a unit reset (see chapter 4.3.1), all deviating settings (e.g. IP address) will be reset to the default settings.
- Chapters 5.3.2 and 5.3.3 describe how you can change the default settings.
- Go to chapter 5.5 if you want to establish a remote maintenance connection with ORA11B with the default settings.

5.3.2 Establishing a network connection to the ORA11B modem

ORA11B is configured via a network connection between ORA11B and a PC.

	NOTE
	We recommend to use a second network card in the PC. This avoids interrupting an existing network connection and re-configuring it.

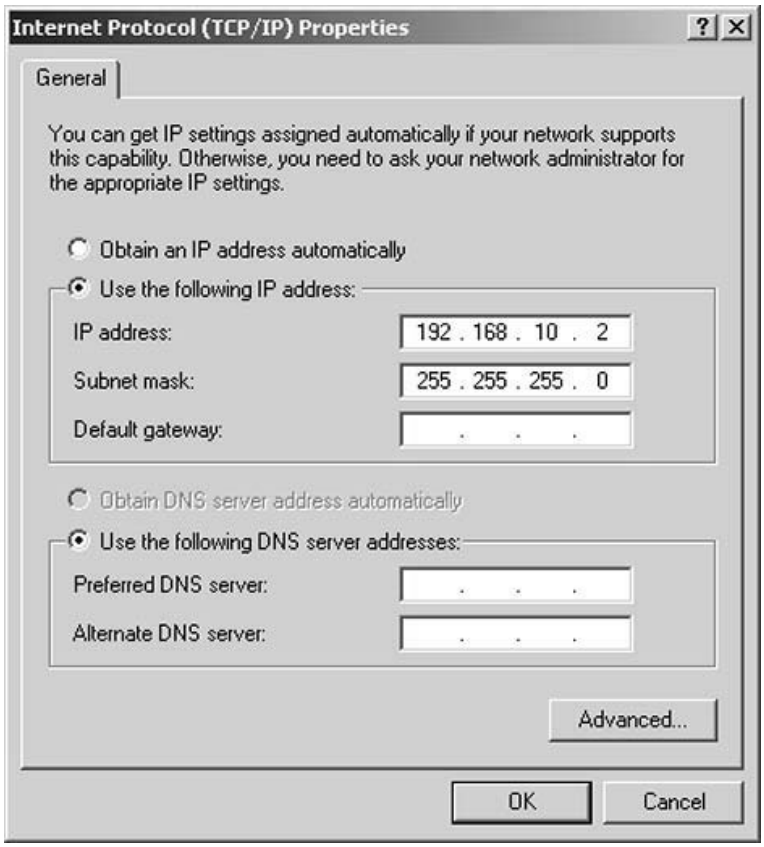
Based on the default settings of ORA11B, you have to set up a network connection as follows:

1. For the default settings of ORA11B, press the reset button of ORA11B three times. Do not hold down the button for any longer than 1 second at a time. You must press the button three times within 2 seconds.
2. The default IP address 192.168.10.3 is found on the housing of ORA11B. The IP address of the PC must be different from the IP address of ORA11B. However, the IP address of the PC must be from the same network, e.g. 192.168.10.2. Set 255.255.255.0 as subnet mask.

   Select the following menu items to make the settings:

   [Start] / [Settings] / [Network Connections]

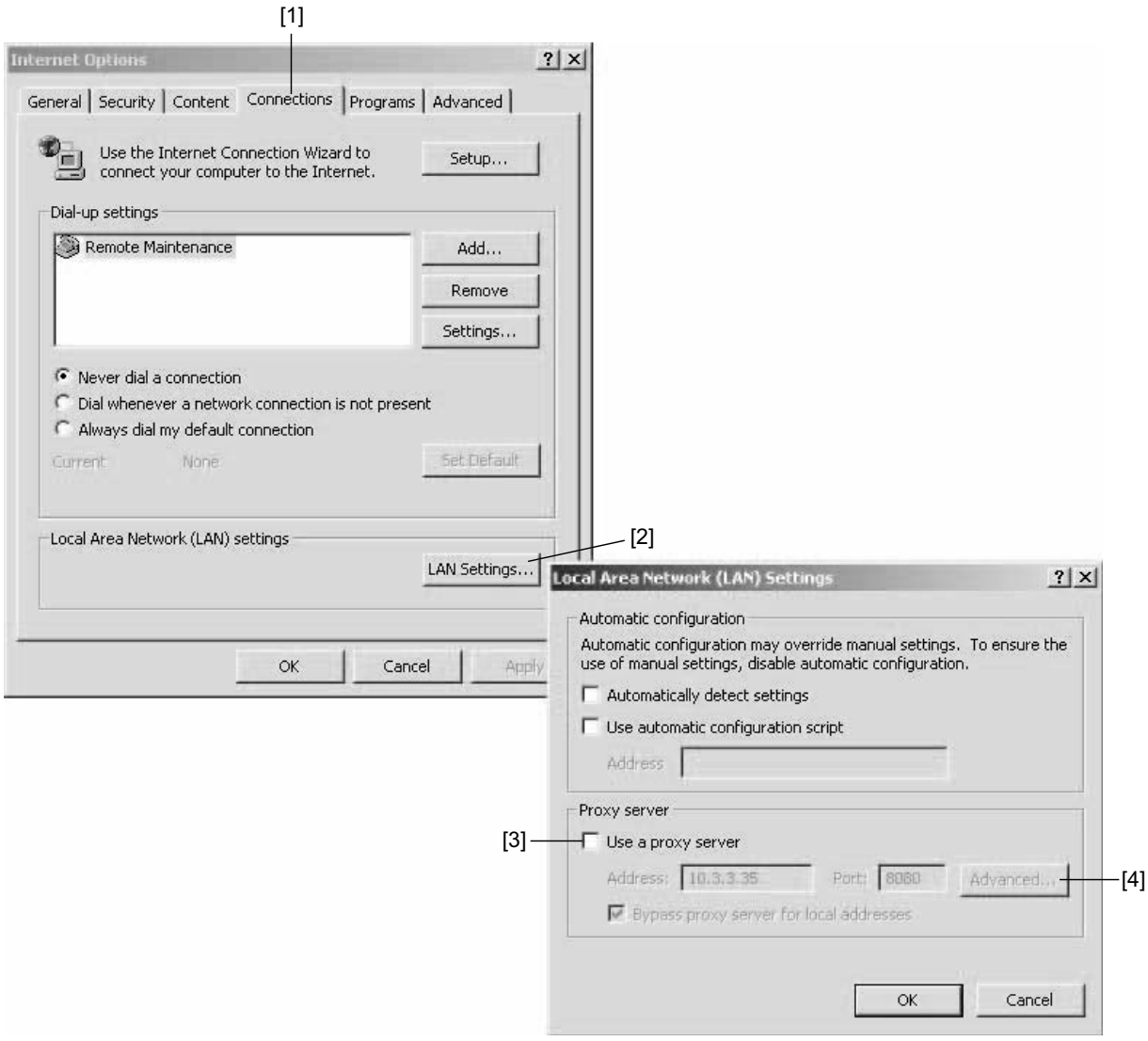
   Highlight the existing network connection and right-click on the menu item "Properties". Tick the "Internet protocol (TCP/IP)" checkbox in the "LAN connection properties" window. The "Internet Protocol (TCP/IP) Properties" window will open (see following figure).


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 168 . 10 . 2
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

12021AEN

Confirm your entries with [OK].

3. Select "Internet Options" from [Start] / [System Configuration]. The "Internet Properties" window is displayed (see following figure). Select the "Connections" tab [1] and click on [LAN Settings] [2] in the "Local Area Network (LAN) Settings" field.



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The "Local Area Network (LAN) Settings" window opens. If necessary, deactivate the "Use a proxy server" [3] checkbox in the "Proxy server" group. This only needs to be done to access the ORA11B configuration page. After successful configuration, you can re-activate the "Use a proxy server" checkbox so that you can access other websites or the configuration interface via the dial-up connection.

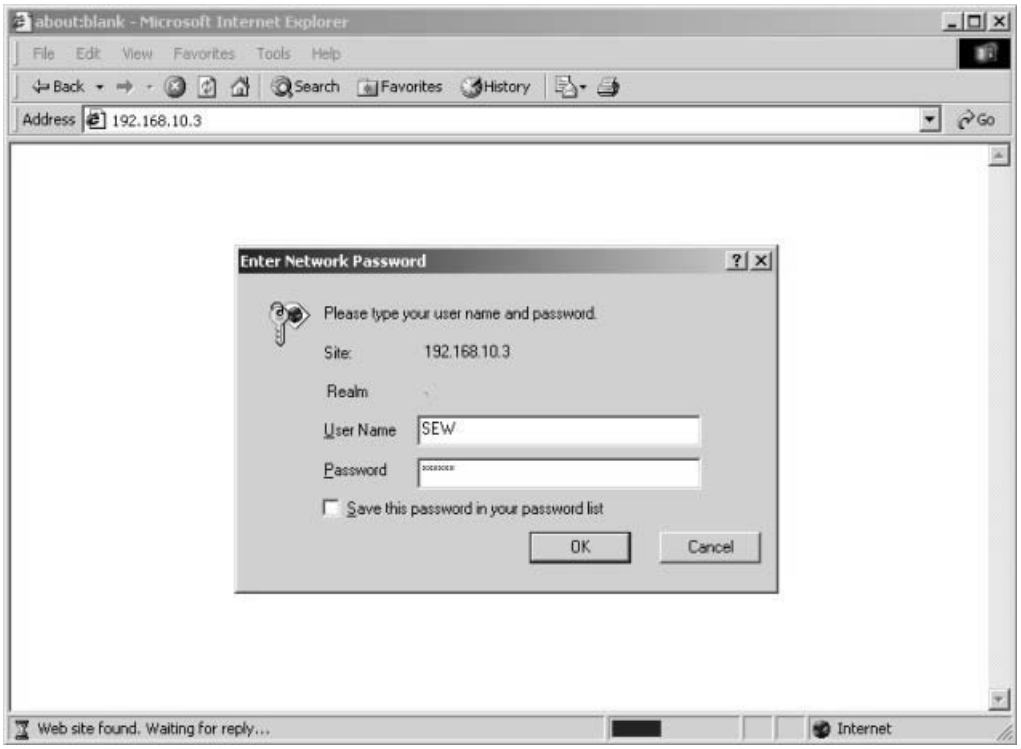
	NOTE
	• The proxy server still needs to be deactivated and reactivated when a second network card has been installed in the engineering PC. • To bypass the proxy server for local addresses, click on [Advanced...] [4] to add the IP address of ORA11B to the list of exceptions as an alternative to deactivating/activating the proxy server.

5.3.3 Changing default settings

Once ORA11B has been connected to the PC via a patch or crossover cable, you can enter the default IP address 192.168.10.3 in the browser.

You have to enter your user name and password to avoid unauthorized access (see following figure). The default settings are:

- User name: SEW
- Password: ORA11B



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After logging in successfully, the start page of ORA11B opens (see following figure). You can enter the default settings (see chapter 5.3.1) under the respective menu item. For more information, refer to the online help under "Display help text"

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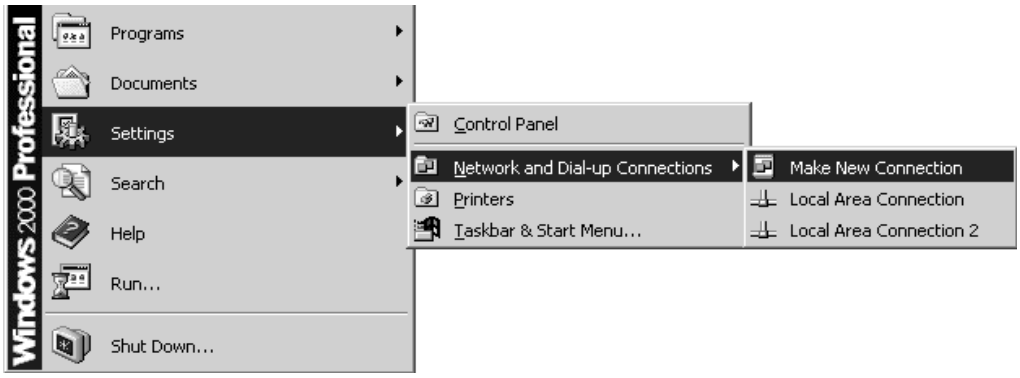
	NOTE
	Do not use the browser button [Update] to update the content of the page. **To update the content of a page, confirm your entries by clicking on [OK] in the configuration interface.**

5.4 Establishing a remote maintenance connection via ORA11B

Proceed as follows:

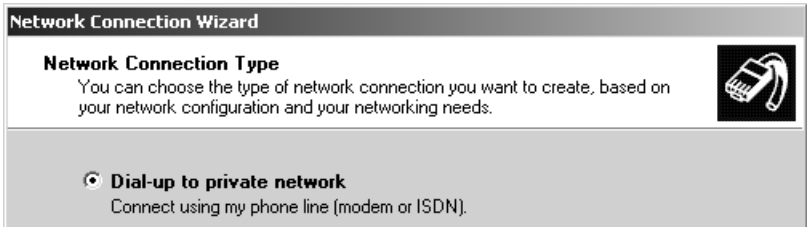
1. First, call up the network connection wizard (see following figure). To do so, select [Start] / [Settings] / [Network and Dial-up Connections] / [Make New Connection].



12031AEN

   The network wizard is called.

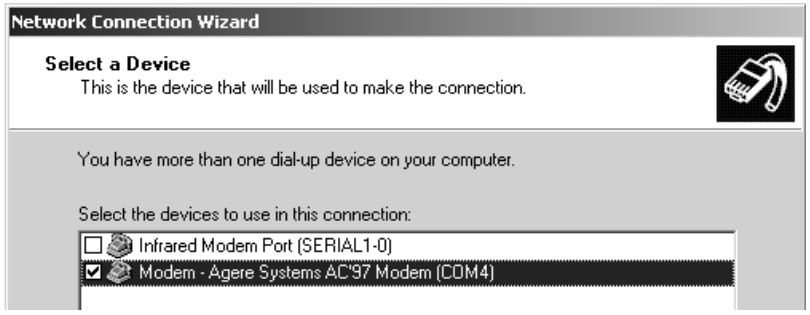
2. Select the network connection type. Select the "Dial-up to private network" radio button (see following figure).


Network Connection Wizard
Network Connection Type
You can choose the type of network connection you want to create, based on your network configuration and your networking needs.
Dial-up to private network
Connect using my phone line (modem or ISDN).

12032AEN

   Click [Next] to continue.

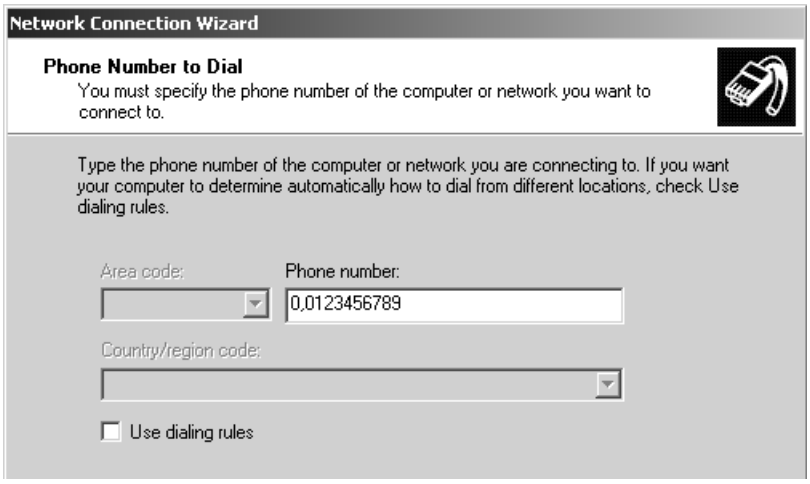
3. Select the unit you want to use for establishing the connection. Tick the "Modem" checkbox (see following figure).


Network Connection Wizard
Select a Device
This is the device that will be used to make the connection.
You have more than one dial-up device on your computer.
Select the devices to use in this connection:
Infrared Modem Port (SERIAL1-0)
Modem - Agere Systems AC'97 Modem (COM4)

12033AEN

   Click [Next] to continue.

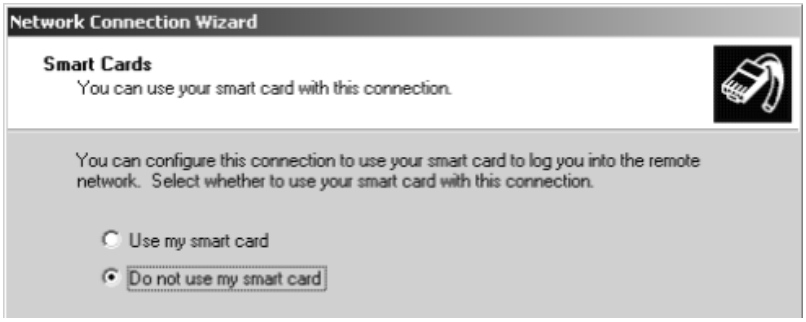
4. Enter the call number of the network to which you want to establish a connection (see following figure). To dial out of a private phone system, an outside line must first be selected by entering a 0. The comma after the 0 represents a pause that will last long enough to obtain the outside line. The full number is then dialed.


Network Connection Wizard
Phone Number to Dial
You must specify the phone number of the computer or network you want to connect to.
Type the phone number of the computer or network you are connecting to. If you want your computer to determine automatically how to dial from different locations, check Use dialing rules.
Area code:
Phone number:
0,0123456789
Country/region code:
Use dialing rules

12034AEN

Click [Next] to continue.

5. In the "Smart cards" window, select the "Do not use my smart card" radio button (see following figure).


Network Connection Wizard
Smart Cards
You can use your smart card with this connection.
You can configure this connection to use your smart card to log you into the remote network. Select whether to use your smart card with this connection.
Use my smart card
Do not use my smart card

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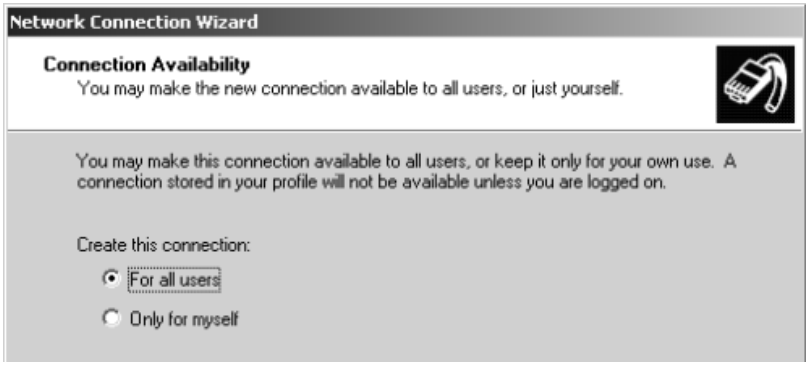
Click [Next] to continue.

6. In the "Connection availability" window, select the "For all users" radio button (see following figure).


Network Connection Wizard
Connection Availability
You may make the new connection available to all users, or just yourself.
You may make this connection available to all users, or keep it only for your own use. A connection stored in your profile will not be available unless you are logged on.
Create this connection:
For all users
Only for myself

12036AEN

Click [Next] to continue.

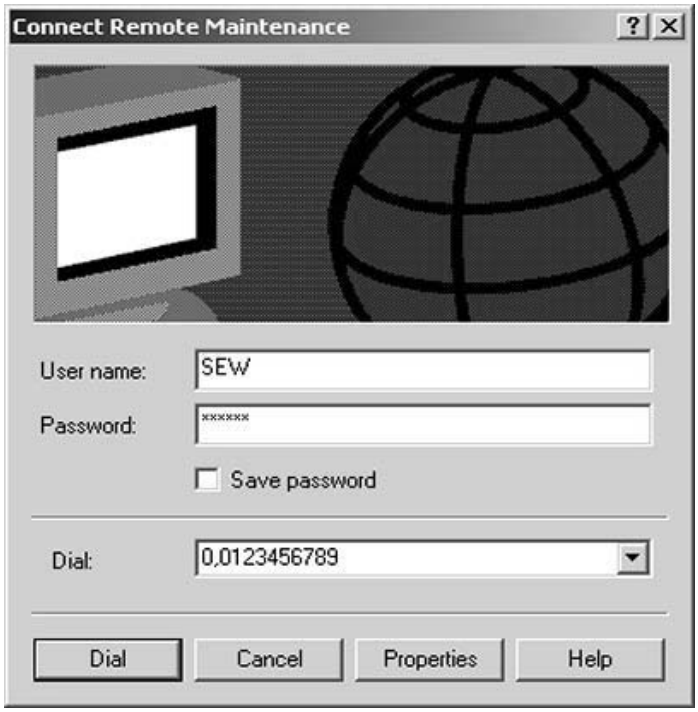
7. To complete the network connection wizard, enter a name for the modem connection (e.g. remote maintenance) and tick the "Add a shortcut to my desktop" checkbox (siehe following figure).

Network Connection Wizard
Completing the Network Connection Wizard
Type the name you want to use for this connection:
Remote Maintenance
To create this connection and save it in the Network and Dial-up Connections folder, click Finish.
To edit this connection in the Network and Dial-up Connections folder, select it, click File, and then click Properties.
Add a shortcut to my desktop
< Back
Finish
Cancel

12037AEN

Click on the [Finish] button. The "Connect Remote Maintenance" window opens.

8. Before you can select anything, you have to enter more settings (see following figure). Enter your user name and password here.



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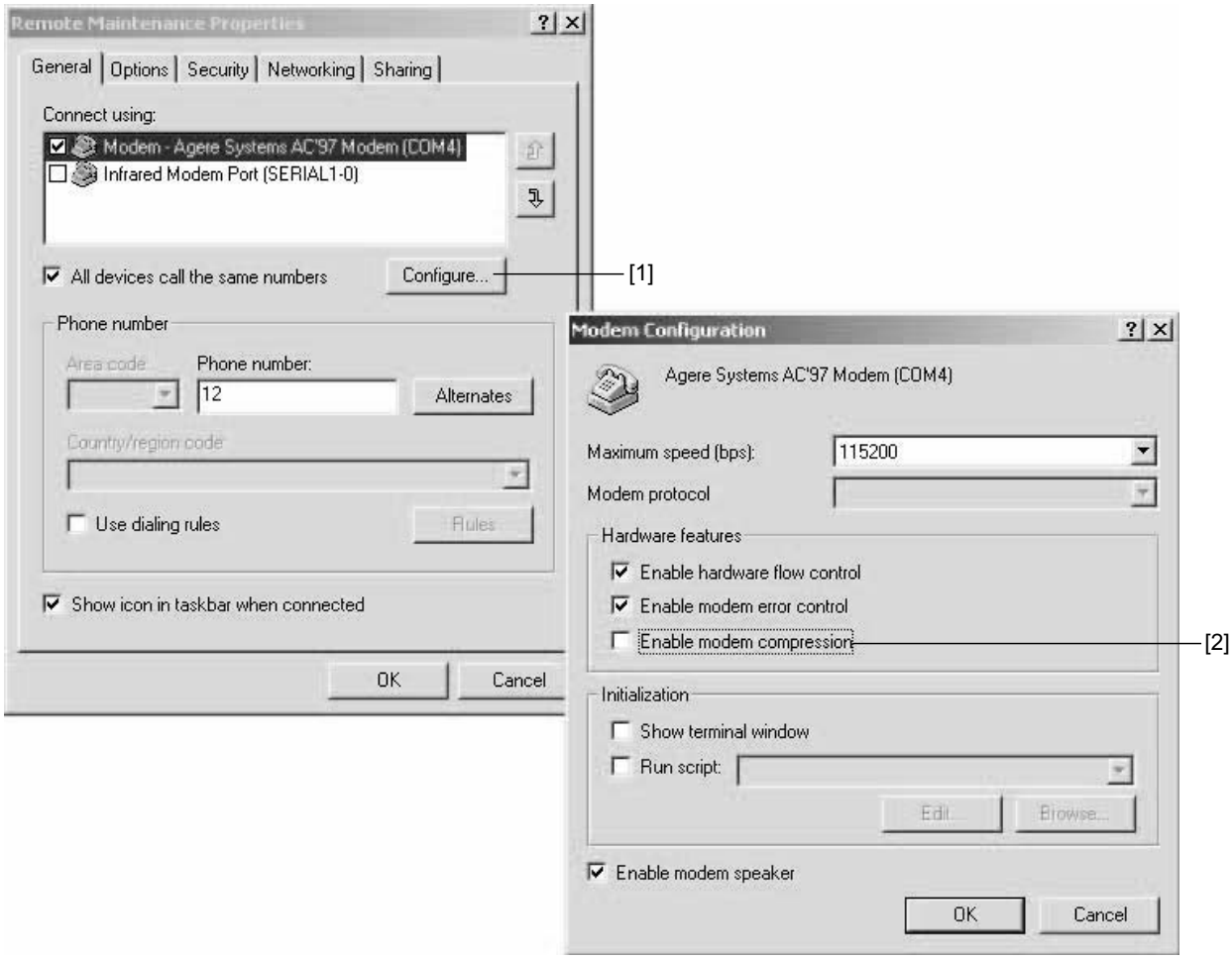
Click the [Properties] button. The "Remote Maintenance" window opens.

9. Select the "General" tab. In the "Connect using:" selection field, tick the "Modem ..." checkbox. Click the [Configure...] button [1]. The "Modem Configuration" window is displayed (see following figure).

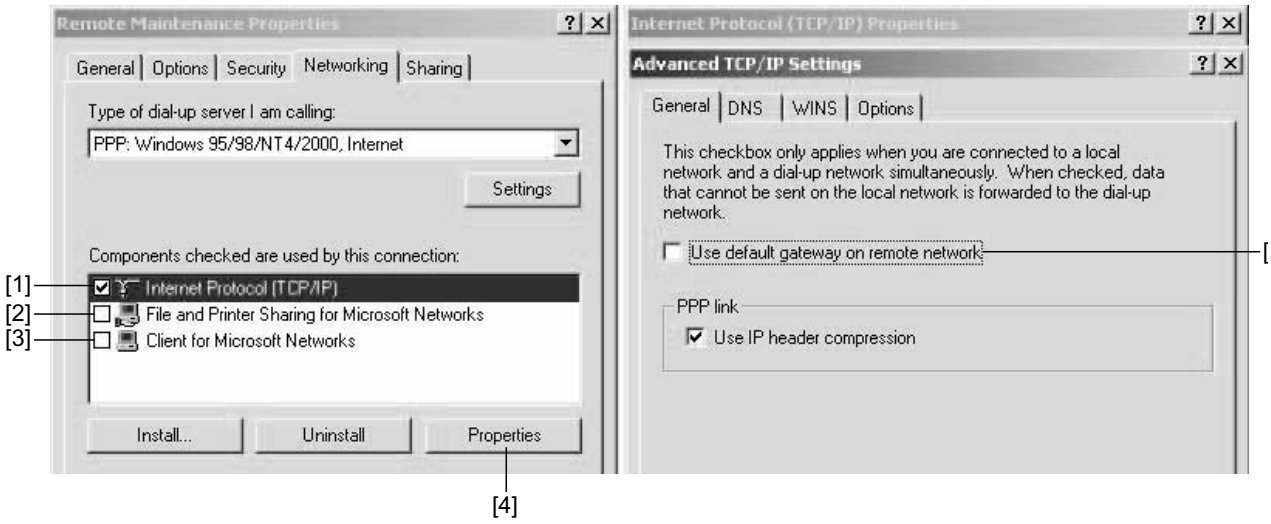


63997AEN

If necessary, deactivate the "Enable modem compression" [2] checkbox in the "Hardware features" group. Confirm your entries with [OK].

10. Select the "Networking" tab. In the "Components checked ...:" selection field, deactivate the checkboxes "File and printer sharing for Microsoft networks" [2] and "Client for Microsoft network" [3] (see following figure on the left).

    Activate the "Internet protocol (TCP/IP)" checkbox [1] and click the [Properties] button [4]. The "Properties - TCP connection/" window will open. You do not have to set anything here. Click the [Advanced] button. The "Advanced TCP/IP settings" window appears (see following figure).

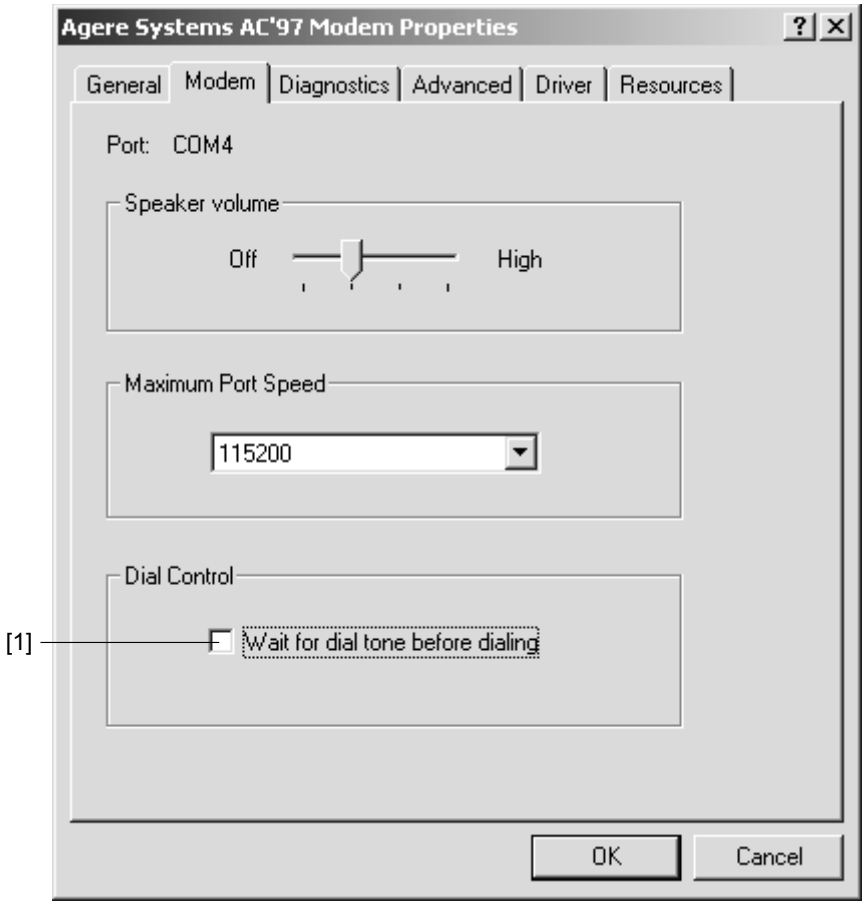


63998AEN

If you want to continue using an existing company intranet while the modem connection is active, you have to deactivate the "Use default gateway on remote network" checkbox [5] on the "General" tab. Confirm your entries with [OK].

	NOTE
	Internet access is only available when the modem connection has been deactivated.

11. In the last step, select the menu items [Start] / [Settings] / [System configuration] / [System] / [Hardware] / [Device manager] / [Modems]. Select the used modem Make a right mouse click to open the context menu and choose "Properties" (see following figure).



63999AEN

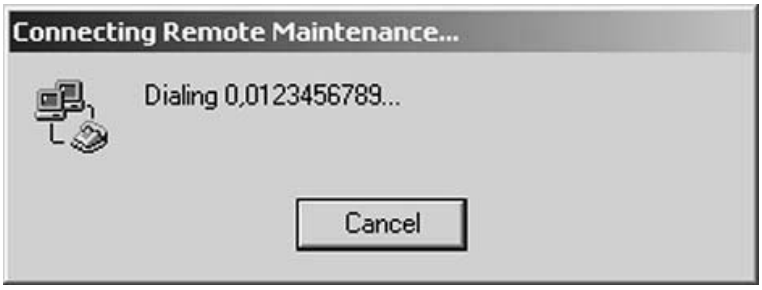
Since dial-up is to be via an outside line, deactivate the checkbox "Wait for dial tone before dialing" [1] in the "Dial control" field. Confirm your entry with [OK].

5.5 Testing the modem connection

Click the [Dial] button to close test the modem connection.

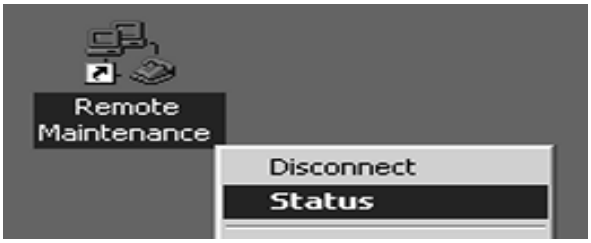
12038AEN

The connection is established (see following figure).



12039AEN

To display the status of the modem connection, highlight the shortcut on the desktop, right-click on it and select "Status" from the context menu (see following figure).



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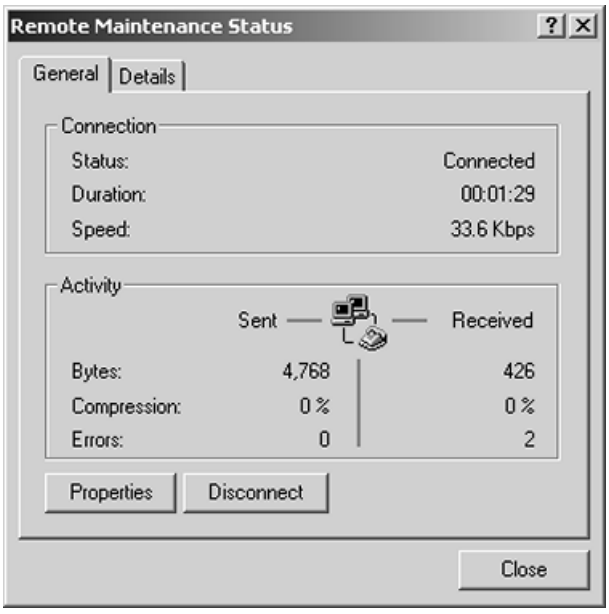
The status of the modem connection is displayed (see following figure).



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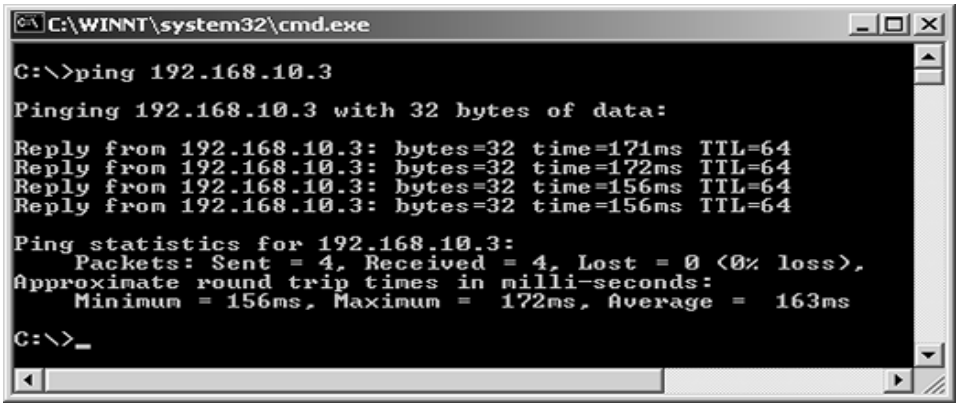
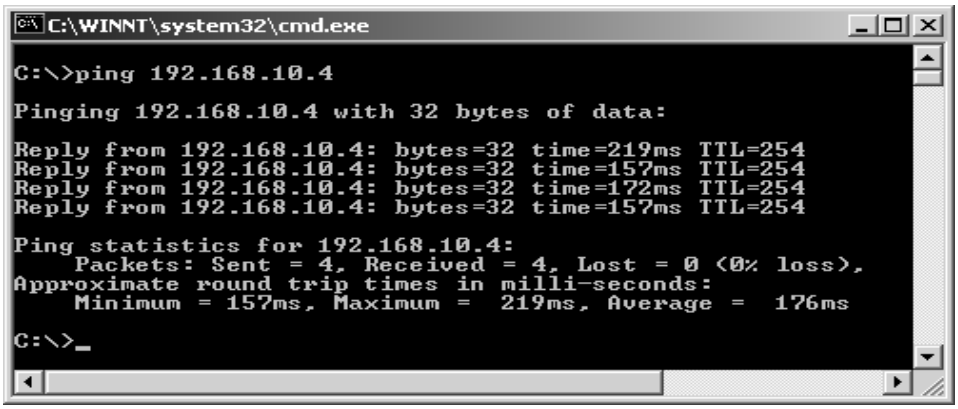
Now, ORA11B responds to a "ping" command (see following figure).


C:\WINNT\system32\cmd.exe
C:\>ping 192.168.10.3
Pinging 192.168.10.3 with 32 bytes of data:
Reply from 192.168.10.3: bytes=32 time=171ms TTL=64
Reply from 192.168.10.3: bytes=32 time=172ms TTL=64
Reply from 192.168.10.3: bytes=32 time=156ms TTL=64
Reply from 192.168.10.3: bytes=32 time=156ms TTL=64
Ping statistics for 192.168.10.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 156ms, Maximum = 172ms, Average = 163ms
C:\>

12042AEN

MOVI-PLC® *advanced* also responds to a "ping" command (see following figure).


C:\WINNT\system32\cmd.exe
C:\>ping 192.168.10.4
Pinging 192.168.10.4 with 32 bytes of data:
Reply from 192.168.10.4: bytes=32 time=219ms TTL=254
Reply from 192.168.10.4: bytes=32 time=157ms TTL=254
Reply from 192.168.10.4: bytes=32 time=172ms TTL=254
Reply from 192.168.10.4: bytes=32 time=157ms TTL=254
Ping statistics for 192.168.10.4:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 157ms, Maximum = 219ms, Average = 176ms
C:\>

12043AEN

The file "NetConfig.cfg" of MOVI-PLC® *advanced* must contain the following entries under Ethernet 2:

<Ethernet2>

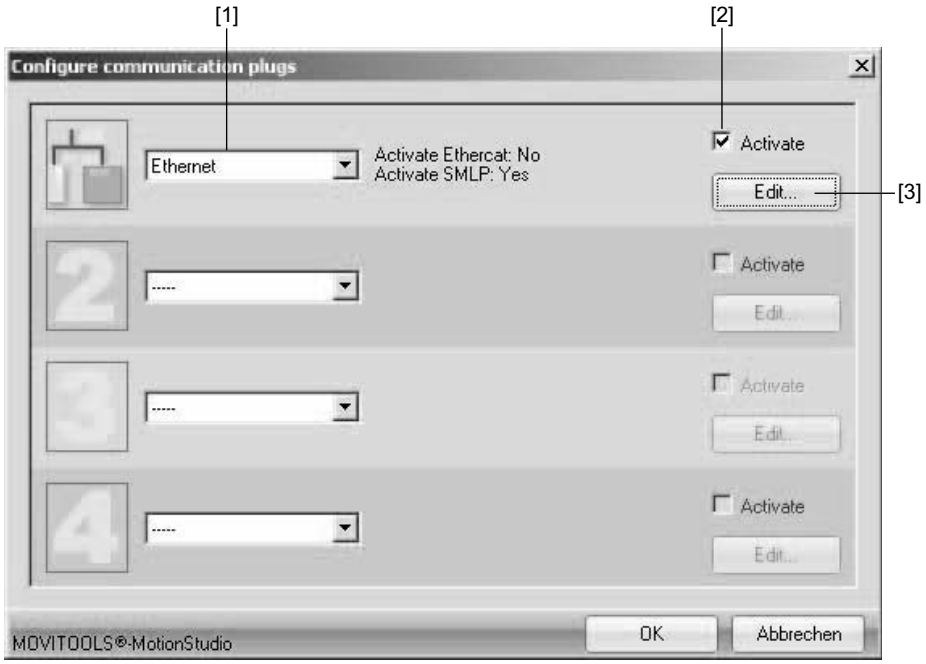
<IPAddress>192.168.10.4</IPAddress>

<Netmask>255.255.255.0</Netmask>

</Ethernet2>

5.6 Establishing a connection on the engineering PC

Select the entry "Ethernet" [1] in MOVITOOLS® MotionStudio under Network communication connections. Tick the "Activate" checkbox [2], then press the [Edit] button [3] (see following figure).



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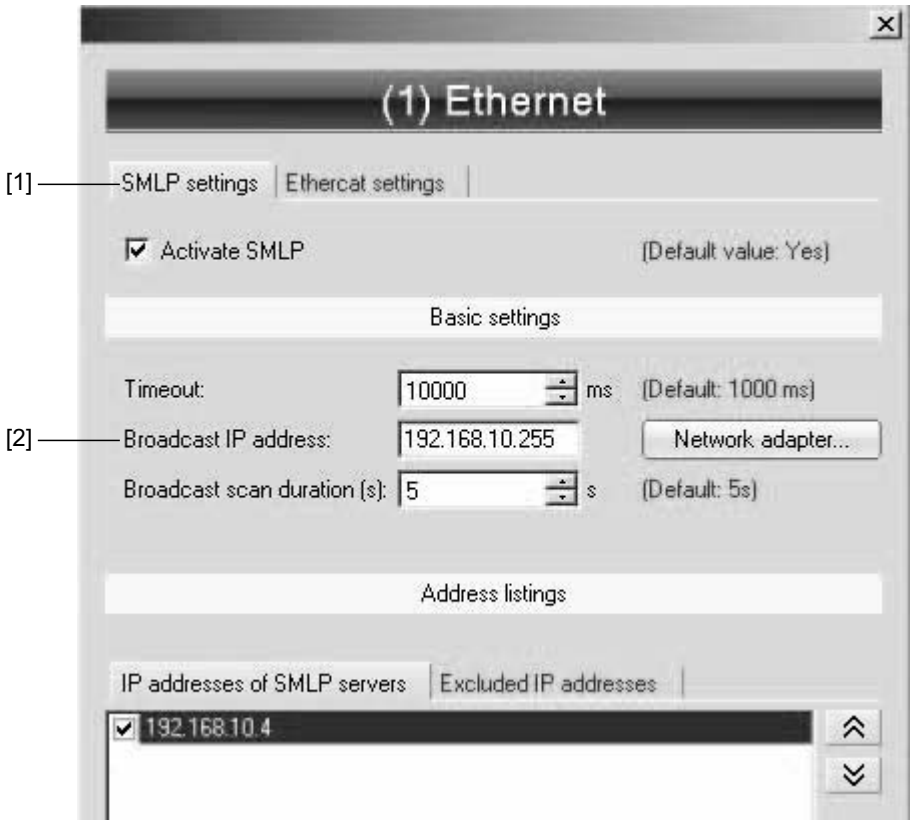
Select the "SMLP settings" "1" tab. In the "Basic settings" group box, in the input field "Broadcast IP Address" [2], enter the IP address of MOVI-PLC® *advanced* (see following figure).



64003AEN

As a result, the MOVI-PLC® *advanced* is also found in the online scan and the PLC Editor can be started as usual.

	NOTES
	To establish a stable connection, you probably have to increase the timeout settings in MOVITOOLS® MotionStudio and in the PLC Editor. The timeout settings are available in the menu items: • MOVITOOLS® MotionStudio: – [Settings] / [Options] / [Communication timeout] Proposal: 15000 ms – [Network] / [Configure communication connections] / [Ethernet] / [SMLP settings] Proposal: 10000 ms • PLC Editor: – [Project] / [Work area] Proposal: 8000 ms These (suggested) timeout settings prevent that a timeout of higher level becomes effective before a timeout of a lower level.

6 Technical Data

6.1 General technical data

General technical data of ORA11B	
Operating voltage	DC 10 - 60 V
Power consumption in standby mode	2 W
Power consumption when connection is active	3 W
Input level	High level: 4 - 12 V Low level: 0 - 1 V
Current consumption of an active input against GND (internal +5 V)	Typically 0.35 mA
Switch output, max. switching voltage	DC 30 V / AC 42 V
Switch output, max. current load	DC 1 A / AC 0.5 A
Weight	300 g
Dimensions (width x height x depth)	70 mm x 110 mm x 75 mm
Temperature range	0 °C - 55 °C
Maximum permitted humidity	95 % non-condensing
Protection class	Housing: IP40 Screw terminals: IP20

6.2 Technical data of ORA11B modem

Technical data of ORA11B modem	
Communication interface for incoming and outgoing PPP connections	Analog 56k modem
Transmission rate	56 kB/s
Supported data compression standards	Fax Class 1/2 MNP 2/3/4, V.42, MNP 10, MNP10 EC, MNP 5, V.42bis, V.44
Supported transmission standards	V.32bis, V.32, V.23, V.22, V.22bis, V.21, V.34+, V.34, (for 56 version also V.90 and V.92) Bell Norm, 103/212, LAPM
4 port Ethernet switch	10/100 MBit/s full/ half-duplex autosense Automatic wiring recognition "Crossover" or "Patch"

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How we're driving the world

With people who think fast and develop the future with you.

With a worldwide service network that is always close at hand.

With drives and controls that automatically improve your productivity.

With comprehensive knowledge in virtually every branch of industry today.

With uncompromising quality that reduces the cost and complexity of daily operations.

SEW-EURODRIVE
Driving the world

With a global presence that offers responsive and reliable solutions. Anywhere.

With innovative technology that solves tomorrow's problems today.

With online information and software updates, via the Internet, available around the clock.

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